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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/423,461	11/30/1999	HIDEKAZU KOJIMA	104651	6769

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EXAMINER

AN, SHAWN S

ART UNIT	PAPER NUMBER
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2613

DATE MAILED: 12/07/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/423,461

Applicant(s)

KOJIMA ET AL.

Examiner

Shawn S An

Art Unit

2613

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 August 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6, 26 and 27 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6, 26 and 27 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Request for Continued Examination

1. The request filed on 8/11/04 for a Request for Continued Examination (RCE) under 37 CFR 1.114 based on parent Application No. 09/423,461 is acceptable and a RCE has been established. An action on the RCE follows.

Response to Amendment

2. As per Applicant's instructions as filed on 8/11/04, claims 1-6 have been amended, and claims 26-27 have been newly added.

Response to Remarks

3. Applicant's remarks filed on 8/11/04 have been fully considered but they are not persuasive. The Applicants present arguments of which neither Hattori nor Takahashi's references discloses or suggests:

A) an optical fiber fusion splicer in which positioning of optical axis and end faces of optical fibers can be automatically controlled by capturing and processing image data of the optical fibers photo-taken by cameras from plural directions; and

B) two or more different capturing modes regarding the capturing of the image data, and the capturing modes can automatically be switched in synchronous with or independently from progress of the image processing to position the optical axis and end faces of optical fibers.

However, after careful scrutiny of the Hattori and Takahashi's references, the Examiner must respectively disagree, and maintain the grounds of rejection for the reasons that follow.

In response to the argument A), Hattori clearly discloses an optical fiber fusion splicer (Fig. 1; abs.) in which positioning of optical axis and end faces of optical fibers (50a, 50b) can be automatically controlled by capturing and

processing image data of the optical fibers photo-taken by cameras from plural directions (directions opposite and same directions by first and second cameras) (col. 3, lines 6-35).

Furthermore, in response to Applicants' arguments pertaining to the preamble of the claims 1 and 5, the recitation (see A, above) has not been given much patentable weight because the recitation occurs in the preamble. A preamble is generally not accorded any patentable weight where it merely recites the purpose of a process or the intended use of a structure, and where the body of the claim does not depend on the preamble for completeness but, instead, the process steps or structural limitations are able to stand alone. See *In re Hirao*, 535 F.2d 67, 190 USPQ 15 (CCPA 1976) and *Kropa v. Robie*, 187 F.2d 150, 152, 88 USPQ 478, 481 (CCPA 1951).

In response to the argument B), Hattori clearly discloses the image capturing means (Fig. 1, 2a, 2b) having two or more different capturing modes (memory for cameras images 1 and 2, respectively) regarding the capturing of the image data (Fig. 5A), and image processing (7) to position the optical axis and end faces of optical fibers (50a, 50b).

Hattori does not specifically disclose the capturing modes are automatically switched in synchronous with or independently from progress of the image processing.

However, Takahashi teaches two camera image observation processing apparatus (Fig. 11(a)) comprising the image capturing means (2a, 2b) having two or more different capturing modes (Fig. 12, 53, memory for cameras 2a and 2b, respectively), wherein the capturing modes which are automatically switched (Fig. 12, 54; col. 11, lines 45-53) in synchronous with or independently from progress of the image processing (Fig. 11, 37).

Therefore, it would have been obvious to a person of ordinary skill in the relevant art employing an optical fiber observing image processing apparatus as taught by Hattori to incorporate the conventional concept of the automatic switching of the

capturing modes as taught by Takahashi so that the image capturing means have two or more different capturing modes regarding the capturing of the image data, and the capturing modes can automatically be switched in synchronous with or independently from progress of the image processing to position the optical axis and end faces of optical fibers for highly accurate observation and flexibility (switching) of the optical fiber images.

Furthermore, the Applicants' assert that a stereo image is not created when only one CCD is used. Therefore, there would have been no motivation in Takahashi to use only one CCD.

In response to the Applicants' assertion, Hattori clearly discloses image capturing means (Fig. 1, elements 2a, 2b) capturing image data from at least two cameras, and Takahashi teaches image observation processing apparatus (Fig. 11(a)) comprising the image capturing means (2a, 2b) having two or more different capturing modes (Fig. 12, 53, memory for cameras 2a and 2b, respectively), wherein the capturing modes which are automatically switched (Fig. 12, 54; col. 11, lines 45-53) in synchronous with or independently from progress of the image processing (Fig. 11, 37).

Henceforth, since independent claims 1 and 5 does not call for using only one CCD/camera and the Applicant's invention (Fig. 1) discloses also image capturing means (Fig. 1, elements 1 and 1) capturing image data from at least two cameras, why would there has to be a motivation in Takahashi to use only one CCD ?

Using only one CCD certainly teaches away from the Applicants' invention.

Takashi's reference has been merely introduced to disclose the image processing aspect of the Applicant's invention, and also to cure the shortcoming of the primary Hattori reference and the claims 1 and 5 limitations.

Moreover, in response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually

where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-6 and 26-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hattori (6,034,718) in view of Takahashi (5,522,789).

Regarding claims 1 and 5, Hattori discloses an optical fiber observing image processing apparatus for the optical fusion splicer (Fig. 1; abs.) in which end faces of optical fibers (50a, 50b) can be automatically controlled by capturing and processing image data of the optical fibers photo-taken by cameras from plural directions (directions opposite and same directions by first and second cameras) (col. 3, lines 6-35), comprising:

an image capturing means (Fig. 1, 2a, 2b) capturing image data from at least two cameras and image processing only desired image data from each of the cameras; and

the image capturing means having two or more different capturing modes (memory for cameras 1 and 2, respectively) regarding the capturing of the image data (Fig. 5A), and image processing to position the optical axis and end faces of optical fibers (50a, 50b).

Hattori does not specifically disclose that the capturing modes are automatically switched in synchronous with or independently from progress of the image processing, and capturing means having a capturing mode in which one scanning line of the respective camera is divided into two so that the desired camera is assigned to the respective divided scanning line to capture the image data of the cameras into one scanning line in a multiplexed form.

However, Takahashi teaches two camera image observation processing apparatus (Fig. 11(a)) comprising the image capturing means having two or more different capturing modes (Fig. 12, 53, memory for cameras 2a and 2b, respectively), wherein the capturing modes which are automatically switched (Fig. 12, 54; col. 11, lines 45-53) in synchronous with or independently from process of the image processing (Fig. 11, 37).

Takahashi also teaches the capturing means having a capturing mode in which one scanning line of the respective camera is divided into two (Fig. 15, elements 31a, 31b) so that the desired camera is assigned to the respective divided scanning line to capture the image data of the cameras into one scanning line in a multiplexed form (element 65).

Therefore, it would have been obvious to a person of ordinary skill in the relevant art employing an optical fiber observing image processing apparatus as taught by Hattori to incorporate the conventional concept of the automatic switching of the capturing modes as taught by Takahashi so that the image capturing means have two or more different capturing modes regarding the capturing of the image data, and the capturing modes can automatically be switched in synchronous with or independently from progress of the image processing to position the optical axis and end faces of optical fibers, and the capturing means have a capturing mode in which one scanning line of the respective camera is divided into two so that the desired camera is assigned to the respective divided scanning line to capture the image data of the

cameras into one scanning line in a multiplexed form for highly accurate observation and flexibility (switching) of the optical fiber images.

Regarding claims 2 and 6, Takahashi discloses capturing modes in which the image data can be captured from the cameras from frame to frame and field to field and the image data from cameras can be captured by successively switching cameras from frame to frame and field to field (Fig. 15; col. 13, lines 45-67; col. 14, lines 1-14), wherein the capturing mode on which one scanning line of the respective camera is divided into two (Fig. 15, elements 31a, 31b) so that the desired camera is assigned to the respective divided scanning line to capture the image data of the cameras into one scanning line in a multiplexed form (elements 65).

Furthermore, a frame (two fields) and a field are inherently made up of a plurality of pixels.

Therefore, it would have been obvious to a person of ordinary skill in the relevant art, wherein, a capturing modes can include at least a capturing mode in which image data can be captured and successively switched from cameras from the pixel to pixel for highly accurate observation and flexibility (switching) of the optical fiber images.

Regarding claims 3-4 and 26-27, Takahashi discloses the capturing means having a capturing mode in which a field of the respective camera is divided into two (Fig. 15, elements 31a, 31b) so that the desired camera is assigned to the respective divided field to capture the image data of the cameras into one field in a multiplexed form (elements 65).

Conclusion

6. Any inquiry concerning this communication or earlier communications from the Examiner should be directed to **Shawn S An** whose telephone number is 703-305-0099. The Examiner can normally be reached on Flex hours (10).

7. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

8. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



SSA

Primary Patent Examiner

12/1/04